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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/016,335	12/10/2001	Gerhard Bartscher	81480LPK	6479

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EXAMINER

GLEITZ, RYAN M

ART UNIT PAPER NUMBER

2852

DATE MAILED: 11/15/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/016,335

Applicant(s)

BARTSCHER ET AL.

Examiner

Ryan Gleitz

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-26 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-13 and 17-26 is/are rejected.
- 7) ☒ Claim(s) 14-16 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 10 December 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 03/06/03 12/10/01.

- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

Claim Objections

Claim 4 is objected to because “the air jet” lacks antecedent basis.

Claims 7-12 are objected to because claim 7 recites a “second blowing device to create a second air cushion” without previously reciting a first blowing device of a first air cushion. It is suggested that claim 7 should depend on claim 3, which would provide the proper antecedent basis.

Drawings

The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the linkage, crank and rocker mechanism, and wheelwork (claim 16) must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as “amended.” If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either “Replacement Sheet” or “New Sheet”

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pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-8 and 17-22 are rejected under 35 U.S.C. 102(b) as being anticipated by Oelbrandt et al. (EP 864944).

Oelbrandt et al. disclose a toner jet printing system, col. 13, line 42, which reads on a digital printing or copying machine for one-sided or double-sided printing on a substrate while using at least one toner. Thermal processor (20) is at least one fixation device for fixing the toner image on the substrate (5), wherein the fixation device (20) has at least one heating device (51) for melting the toner image, past which the substrate (5) can be taken, characterized by a guide device (43) for the free floating movement of the substrate (5) in the effective range of the heating device (51). See col. 10, lines 19-27.

Regarding claims 2, 3, 5, and 7, the floating condition of the substrate (5) can be achieved by at least one air cushion acting on the topside (6) having the toner image being fixed and/or the underside (7) of the substrate (5). At least a first blowing device (54) creates a first air cushion on the substrate's underside (7), wherein the first blowing device (54) comprises at least one

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nozzle (formed in a perforated plate) and first and second base plates as shown by figure 2, which can be directed against the substrate underside (7).

Regarding claim 4, the flow of air that moves the substrate along the path, col. 10, line 19-22, based on a variety of guide patterns as shown by figure 6, must have at least one directional component directed perpendicular to the substrate underside (7) and one directional component directed in the transport direction of the substrate (5).

Regarding claim 17, a transport belt (80, 90) or roller, which serves to transport the substrate (5) past the heating device and past the heating device as printed.

Regarding claim 18, the top half of housing (31) reads on a at least one second guide element, arranged stationary in the intermediate space between the first guide element (80, 90) and the heating device.

Regarding claims 19 and 20, the effective range/fixing range of the heating device is very short and the energy density which can be transmitted by the noncontact heating device is very high.

Regarding claim 21, hot air can be applied by the heating device.

Regarding claim 22, the thermal processor (20) and/or moving means (80) is a control unit for controlling the substrate speed and/or the position of the substrate relative to the heating device.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person

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having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 9-13 and 23-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Oelbrandt et al. (EP 864944) in view of Deguchi et al. (JP 57-130074).

Oelbrandt et al. disclose the copying machine above including heating device (51) but are silent as to the specific type of heater that is used.

However, Deguchi et al. disclose a microwave heater to melt toner and attach it to a sheet. The microwave heater is a radiative device. Protection plate (10) is arranged in the radiation path, the plate must be formed of a material transparent and permeable to the electromagnetic radiation in order for the microwave heater to function. All spaces in the device, including the free space between the protection plate and the second base plate, can be exposed to pressurized air.

Regarding claims 13, 23, 24, the microwave heater is a microwave resonator.

Regarding claim 25, Oelbrandt et al. show that both horizontal and vertical orientations can be used for the thermal processor in figures 7 and 8.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the thermal processor of Oelbrandt et al. with the microwave heater taught by Deguchi et al. to melt and attach toner to a sheet with high efficiency and miniaturization of the apparatus. See abstract, lines 1-9.

Claim 26 is rejected under 35 U.S.C. 103(a) as being unpatentable over Oelbrandt et al. (EP 864944) in view of Iijima (JP 11-202738).

Oelbrandt et al. disclose the copying machine above but do not disclose a cooling device.

However, Iijima discloses a paper cooling device (7) with noncontact operation constituted so that ejected papers can be excellently stacked at a paper ejecting time.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the thermal processor of Oelbrandt et al. with the cooling device taught by Iijima to insure that toner on the paper is sufficiently fixed and the ejected paper can be excellently stacked. See abstract, lines 5-7.

Allowable Subject Matter

Claims 14-16 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Other Prior Art

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Mitsuya et al. (US 4,959,693) disclose a device for cooling and conveying a fused toner image via a cushion of air.

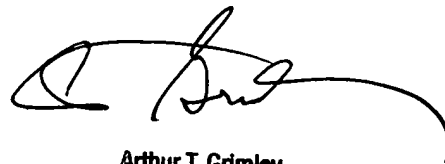
Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ryan Gleitz whose telephone number is (571) 272-2134. The examiner can normally be reached on Monday-Friday between 9:00AM and 6:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Arthur Grimley can be reached on (571) 272-2136. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


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